

47. (Amended) A substantially pure nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 5.

Sub F1

48. (Amended) The substantially pure nucleic acid molecule of claim 46 comprising the nucleotide sequence of SEQ ID NO: 1.

F1 cont

49. (Amended) A vector comprising the substantially pure nucleic acid molecule of any of claims 46, 47, or 48.

Sub F2

50. (Amended) A host cell comprising the [isolated] substantially pure nucleic acid molecule of any of claims 46, 47, or 48.

52. (Amended twice) A substantially pure nucleic acid molecule which hybridizes under conditions of hybridization in 50% formamide at 42°C and washing in 0.1 X SSC at 65°C to a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO:2.

E2

53. (Amended) A substantially pure nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:6.

54. (Amended) A substantially pure nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 2.

55. (Amended) A vector comprising the substantially pure nucleic acid molecule of any of claims 52, 53, or 54.

56. (Amended) A host cell comprising the substantially pure nucleic acid molecule of any of claims 52, 53, or 54.

58. (Amended twice) A substantially pure nucleic acid molecule which hybridizes under conditions of hybridization in 50% formamide at 42°C and washing in 0.1 X SSC at 65°C to a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO:3.

59. (Amended) A substantially pure nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:7.

Sub F3
58

60. (Amended) A substantially pure nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:3.

F3
Cont
61. (Amended) A vector comprising the substantially pure nucleic acid molecule of any of claims 58, 59, or 60.

62. (Amended) A host cell comprising the substantially pure nucleic acid molecule of any of claims 58, 59, or 60.

E
64. (Amended twice) A substantially pure nucleic acid molecule which hybridizes under conditions of hybridization in 50% formamide at 42°C and washing in 0.1 X SSC at 65°C to a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO:4.

Sub F4
65. (Amended) A substantially pure nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:8.

66. (Amended) The substantially pure nucleic acid molecule of claim 64 comprising the nucleotide sequence of SEQ ID NO:4.

Sub F4
F4

67. (Amended) A vector comprising the substantially pure nucleic acid molecule of any of claims 64, 65, or 66.

68. (Amended) A host cell comprising the substantially pure nucleic acid molecule of any of claims 64, 65, or 66.

70. (Amended) A substantially pure nucleic acid molecule which hybridizes under conditions of hybridization in 50% formamide at 42°C and washing in 0.1 X SSC at 65°C to a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO:13.

F5 cont

71. (Amended) A substantially pure nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 14.

Sub F5

72. (Amended) A substantially pure nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 13.

73. (Amended) A vector comprising the substantially pure nucleic acid molecule of any of claims 70, 71, or 72.

74. (Amended) A host cell comprising the substantially pure nucleic acid molecule of any of claims 70, 71, or 72.

Sub F6

76. (Amended) A substantially pure nucleic acid molecule which hybridizes under conditions of hybridization in 50% formamide at 42°C and washing in 0.1 X SSC at 65°C to a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO:10.

Sub F6

77. (Amended twice) A substantially pure nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 12.

E6
Sub F6

78. (Amended) A substantially pure nucleic acid molecule of claim 77 comprising the nucleotide sequence of SEQ ID NO: 10.

E6
Sub F6

79. (Amended) A vector comprising the substantially pure nucleic acid molecule of any of claims 75, 77, or 78.

80. (Amended) A host cell comprising the substantially pure nucleic acid molecule of any of claims 76, 77, or 78.

Ecore

82. (Amended twice) A substantially pure nucleic acid molecule which hybridizes under conditions of hybridization in 50% formamide at 42°C and washing in 0.1 X SSC at 65°C to a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO:15.

Sub F1

83. (Amended) The substantially pure nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 1, trisin.

Sub F1

84. (Amended) A vector comprising the substantially pure nucleic acid molecule of any of claims 82 or 83.

85. (Amended) A host cell comprising the substantially pure nucleic acid molecule of any of claims 82 or 83.

Please add new claims 87-95:

Sub F&F8

--87. A substantially pure nucleic acid consisting essentially of SEQ ID NO:1.

88. The substantially pure nucleic acid molecule of claim 52 or claim 53, wherein the polypeptide encoded by the substantially pure nucleic acid molecule can induce bacterial-mediated endocytosis (BME) in the absence of a wild type SspC polypeptide.

89. The substantially pure nucleic acid molecule of claim 58 or claim 59, wherein the polypeptide encoded by the nucleic acid molecule can induce bacterial-mediated endocytosis (BME) in the absence of a wild type SspD polypeptide.

*Sub
P&S*
90. A substantially pure nucleic acid molecule consisting essentially of SEQ ID NO:4.

91. The substantially pure nucleic acid molecule of claim 64 or 65, wherein the polypeptide encoded by the nucleic acid molecule can induce bacterial-mediated endocytosis (BME) in the absence of a wild type SspA polypeptide.

92. A substantially pure nucleic acid molecule consisting essentially of SEQ ID NO:10.

Front
93. A substantially pure nucleic acid molecule consisting essentially of SEQ ID NO:2

94. A substantially pure nucleic acid molecule consisting essentially of SEQ ID NO:3.

95. A substantially pure nucleic acid molecule consisting essentially of SEQ ID NO:13--